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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,979	07/03/2006	Edwin Gerard Ijpeij	4662146	2600
23117 7590 09/04/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
LU, C CAIXIA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
09/04/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,979

Applicant(s)

IJPEIJ ET AL.

Examiner

Caixia Lu

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12, 15, 16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) 13, 14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant has originally election without traverse of imine ligand species as tri-*t*-butyl-aminophosphonium chloride and base species as organomagnesium compound Prior to the filing RCE on August 14, 2008. During the phone interview with Attorney Arthur Crawford on August 21, 2008, applicants' representative indicated that applicants wish to elect inorganic base (K_2CO_3) as the base species. The search results show that the elected species is novel and the examination is now extended to all species.

Claim Rejections - 35 USC § 112

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 1-2 of page 4, the format of the selective groups for " R^{2i} " is improper because Markush terminology requires the phrase "selected from the group consisting of" and the connector "and" between the last two members. See MPEP 2173.05 (h).

In line 2 of page 4, term "aryloxy radicals" should be replaced with "aryloxy radicals" in order to be grammatical.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11, 12, 15, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over von Haken Spence et al. (US 6,355,744) and McMeeking et al. (US 6,420,300 B1) independently.

von Haken Spence teaches the preparation of phosphinimine ligand containing titanocene complex by reacting tri-t-butyl-aminophosphimine, n-BuLi, and cyclopentadienyltitanium (col. 8, lines 20-32, Synthesis 2).

McMeeking teaches the preparation of phosphinimine ligand containing titanocene complex by reacting $(\text{Me}_2\text{N})_2\text{C}=\text{NH}$ and n-BuLi for olefin polymerization (col. 8, lines 53-67).

The disclosures of the cited patents anticipate the instant claims.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 11, 12, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over von Haken Spence et al. (US 6,355,744) in view of Gao et al. (CA 2,261,518) and Nielsen et al. (US 2004/0010142).

von Haken Spence teaches the preparation of phosphinimine ligand containing titanocene complex by reacting tri-t-butyl-aminophosphimine and n-BuLi (col. 8, lines 20-32, Synthesis 2).

It is noted that the aminophosphimine is used directly in von Haken Spence rather than the salt form of the aminophosphinium halides. However, using the aminophosphinium halide to provide the corresponding phosphinimine ligand

compound is conventional practice since the salt form is more stable, easy to handle and readily available and such is demonstrated in Gao, see page 3, the last paragraph. It is noted that Gao does not expressly list all the bases which can be used to react with the aminophosphonium halides for providing the phosphinimine, however, Nielsen teaches that bases such as alkyl lithium and alkyl magnesium halide are functionally equivalent (col. 5, [0077]). It is also noted the by-products of the reaction between aminophosphonium halide and alkyl lithium or alkyl magnesium halide are alkane and metal halide and those by-products do not interfere with the olefin polymerization. Therefore, it would an option to use the catalyst directly without separating the catalyst from the reaction mixture.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Gao's teaching to provide aminophosphimine ligand compound by reacting an aminophosphonium halide with a base such as alkyl lithium and alkyl magnesium halide to von Haken Spence's catalyst preparation process to prepared the phosphinimine ligand containing metallocene complex with lowered cost and in the absence of any showing criticality and unexpected results.

Response to Arguments

7. Applicant's arguments with respect to the rejected claims as shown above have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached on 9:00 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Caixia Lu/
Caixia Lu, Ph. D.
Primary Examiner
Art Unit 1796